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EXAMINER	
LAYE, JADE O	

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/819,163	OVADIA, SHLOMO	
	Examiner	Art Unit	
	Jade O. Laye	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 3, 10, 11, 18, and 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9, 10, 20, and 27 of co-pending Application No. 09/819,131. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of claims 1, 3, 10, 11, and 19 is encompassed by claims 1, 9, 10, 20, and 27 of the '131 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 4, 12, and 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9, 10, 20, and 27 of copending Application No. 09/819,131 in view of Barber et al. (US Pat. No. 6,799,030). A detailed explanation of the motivation or suggestion to combine is contained below under the rejection of claim 4.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 3, 10, 11, 18, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Palm. (US Pat. No. 6,735,245).

As to claim 1, Palm discloses a communication system comprising a modem, which probes the characteristics of the communication channel in order to ascertain an appropriate communication standard. (Abstract). This is achieved through the use of negotiation channels containing characteristics of the communication channel located within the broadband signal (for example, DSL). Once this information is received, the modem will begin transmitting via the appropriate communication standard (i.e., updating parameters of cable modem). (Col. 2, Ln. 45-65). Accordingly, Palm et al anticipate each and every limitation of claim 1.

Claims 10, 11, 18, and 19 correspond to the method claim 1. Thus, each is analyzed and rejected as previously discussed.

As to claim 2, Palm teaches a pilot tone can be encoded in the negotiation channel. (Col. 12, Ln. 33-62). In applicant's specification, "narrow-band channel" is referred to as a "narrow band pilot channel." (Pg. 16, Ln. 5-7). Therefore, the examiner interprets narrow-band channel to refer to a pilot channel. Accordingly, Palm et al anticipate each and every limitation of claim 2.

As to claim 3, Palm further teaches pilot tones can be encoded in the negotiation channels. (Col. 12, Ln. 33-62). Accordingly, Palm et al anticipate each and every limitation of claim 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 4, 7-9, 12, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palm in view of Barber et al. (US Pat. No. 6,799,030).

Claim 4 recites the method of claim 1, wherein tuning a receiver to a channel comprises:

a. accessing a storage medium for a list of information channels within the broadband signal;

b. tuning the receiver to the selected channel; and

c. demodulating the channel to recover system information.

As discussed above, Palm contains all limitations of claim 1, but fails to specifically recite the limitations enumerated in claim 4. However, within the same field of endeavor, Barber et al disclose a communications system utilizing a modem, which is capable of accessing a list of preferred data channels located within a memory device. (sub-elements "a" and "b"). (Col. 10, Ln. 37-61 ; Col. 16, Ln. 38-45). As to sub-element "c", it is inherent that a modem (AKA "*MO*dulater/*DEM*odulator") demodulate channel information to recover whatever data is contained therein. Accordingly, it would have been obvious to one of ordinary skill in this art at the time of applicant's invention to combine the systems of Palm and Barber to provide a communication system capable of providing multiple information channels in order to supply a more efficient and faster data transfer.

Claims 12 and 20 correspond to the method claim 4. Therefore, each is analyzed and rejected as previously discussed.

Claim 7 recites the method of claim 4, further comprising:

a. selecting a next channel from the list of information channels if system information is not contained within a demodulated representation of the channel; and

c. repeating the modifying, reading, and selecting steps until cable modem operating information is identified.

As discussed above, the combined systems of Palm and Barber contain all limitations of claim 4, and Palm further discloses his system is capable of selecting and probing the next channel if a valid data channel is not detected. This is repeated until a valid data channel is

detected. (Col. 12, Ln. 33-62). Accordingly, the combined systems of Palm and Barber also contain all limitations of claim 7.

Claim 8 recites the method of claim 7, further comprising updating the list of channels to promote the channel in which system information was found to the first channel in the list. As discussed above, the combined systems of Palm and Barber contain all limitations of claim 7, but fails to specifically recite the limitations recited herein. However, in light of the teachings of Barber used to reject claim 4 (regarding the listing of the last 10 channels the modem has used for transmission – Col. 10, Ln. 37-61 & Col. 16, Ln. 38-45), replacing the last communicated channel to the top of the list would be an obvious variant. Again, as discussed under the rejection of claim 4, the motivation to combine would be the speed and efficiency of the data transfer of the combined systems. Accordingly, the combined systems of Palm and Barber contain all limitations of claim 8.

Claim 9 recites the method of claim 7, further comprising restoring receiver demodulation parameters to demodulate the broadband signal in accordance with a modulation technique associated with the broadband signal. As discussed above, Palm and Barber contain all limitations of claim 7, and therefore, inherently contain the limitation recited in claim 9. It is inherent a broadband signal be demodulated according to the same modulation technique associated with the signal. Accordingly, the combined systems of Palm and Barber contain all limitations of claim 9.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palm in view of Barber as applied to claim 4 above, and further in view of Frodigh et al. (US Pat. No. 6,125,148).

Claim 5 recites the method of claim 4, wherein demodulating the channel comprises:

a. modifying receiver parameters to demodulate the channel according to a modulation technique that differs from that of the broadband signal; and

b. reading information contained within the demodulated signal to update one or more operating characteristics of the cable modem.

As discussed above, the combined systems of Palm and Barber contain all limitations of claim 4, but fail to specifically disclose the limitations of claim 5. However, within the same field of endeavor, Frodigh et al disclose a communication system wherein a traffic channel and a control channel (i.e., information channel) are modulated/demodulated using different techniques. (sub-element "a") (Col. 3, Ln. 56-63 & Col. 4, Ln. 15-29). As to sub-element "b", the same rejection used under claim 1 can be applied here. Accordingly, it would have been obvious to one of ordinary skill in this art at the time of applicant's invention to further modify the combined systems of Palm and Barber to also encompass the teachings of Frodigh et al in order to provide a communications system capable of detecting a data channel without the need of demodulating all channels contained on the entire broadband signal.

Claim 6 recites the method of claim 5, wherein the information includes an indication of a data channel. As discussed above, the combined systems of Palm, Barber, and Frodigh disclose all limitations of claim 5. Moreover, also as discussed above under the rejection of claims 1 and 2, Palm teaches the negotiation channels can include pilot channels, which indicate

the existence of valid data channels. Accordingly, the combined systems of Palm, Barber, and Frodigh contain all limitations of claim 6 as well.

7. Claims 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palm in view of Frodigh.

Claim 13 recites a computing system according to claim 11, wherein the data channel detection agent modifies a demodulator of the broadband receiver to demodulate the channel according to a modulation technique that differs from the modulation technique associated with the broadband signal to recover information contained within the channel. As discussed above, Palm discloses all limitations of claim 11, but fails to specifically disclose the limitation recited in claim 13. However, within the same field of endeavor, Frodigh et al disclose a communication system wherein a traffic channel and a control channel (i.e., information channel) are modulated/demodulated using different techniques. (Col. 3, Ln. 56-63 & Col. 4, Ln. 15-29). Therefore, it would have been obvious to one of ordinary skill in this art at the time of applicant's invention to combine the systems of Palm and Frodigh in order to provide a system capable of detecting a data channel without the need of demodulating all channels contained on the entire broadband signal, which provides for a faster and more efficient data transfer.

Claim 21 corresponds to claim 13. Accordingly, it is analyzed and rejected as previously discussed.

8. Claims 14-17 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palm in view of Frodigh as applied to claims 13 and 21 above, and further in view of Barber.

Claim 14 recites a computing system according to claim 13, wherein the channel detection agent steps to a next channel in the list if the demodulated channel does not include system operating information. This language mirrors that of claim 7, therefore, it is analyzed and rejected as discussed therein. Accordingly, the combined systems of Palm, Frodigh, and Barber contain all limitations of claim 14.

Claim 15 recites a computing system according to claim 14, wherein the channel detection agent updates the list to promote the channel in which the cable modem operating parameters were found to a first channel in the list. This language mirrors that of claim 8 and, therefore, is analyzed and rejected as discussed therein. Accordingly, the combined systems of Palm, Frodigh, and Barber contain all limitations of claim 15.

Claim 16 recites the computing system of claim 14, wherein the channel detection agent updates one or more operating characteristics of a cable modem in accordance with information recovered from the channel. As discussed above, the combined systems of Palm, Frodigh, and Barber contain all limitations of claim 14, and Palm further discloses updating the system's operating parameters in accordance with information received from the signal. (Col. 2, Ln. 45-65). Accordingly, the combined systems of Palm, Frodigh, and Barber contain all limitations of claim 16.

Claim 17 recites the computing system according to claim 14, wherein the channel detection agent restores demodulator settings once the cable modem parameters are established. This language mirrors that of claim 9, therefore, it is analyzed and rejected as discussed therein.

Accordingly, the combined systems of Palm, Frodigh, and Barber contain all limitations of claim 17.

Claim 22 recites a machine accessible storage medium according to claim 21, wherein the instruction to implement the channel detection agent include instructions to step the receiver to a next channel in the list if the demodulated channel does not include system operating information. This language mirrors that of claim 7 and, therefore, is analyzed and rejected as previously discussed therein. Accordingly, the combined systems of Palm, Frodigh, and Barber contain all limitations of claim 22.

Claim 23 recites a machine accessible storage medium of claim 21, wherein the instructions to implement the channel detection agent includes instructions to update one or more operating characteristics of a cable modem in accordance with information recovered from the channel. This language mirrors that of claim 1, therefore, the same rejection is applicable. Accordingly, the combined system of Palm, Frodigh, and Barber contain all limitations of claim 23.

Claim 24 recites a machine accessible storage medium according to claim 23, wherein the instructions to update one or more operating characteristics of the cable modem include instructions to restore the receiver to demodulate the identified channel in accordance with a modulation technique associated with the broadband signal. This language mirrors that of claim 9, therefore, it is analyzed and rejected as discussed therein. Accordingly, the combine systems of Palm, Frodigh, and Barber contain all limitations of claim 24.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Poon et al disclose a system capable of generating and transmitting a signal having different modulation formats. (US Pat. No. 6,671,328).

b. Frodigh et al disclose a method of communication in a system capable of supporting multiple modulation schemes. (US Pat. No. 6,456,627).

c. Vogel discloses a system capable of transmitting an upstream bandwidth allocation channel change map. (US Pat. No. 6,742,187).

d. Shridhar et al disclose a method and system capable of supporting multiple X-DSL protocols. (US Pat. No. 6,842,429).

e. Unger et al disclose a method and system of initializing a data channel within a cable modem. (US Pat. No. 6,230,326).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jade O. Laye whose telephone number is (571) 272-7303. The examiner can normally be reached on Mon. 7:30am-3pm, Tues.-Fri. 7:30-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner's Initials JL
February 14, 2005.

NGOC YEN VU
PRIMARY EXAMINER